9. Milo

Program Name: Milo.java **Input File: milo.dat**

Since neither the Cowboys or the Texans were in the Super Bowl this past February, Milo quickly became bored as he watched the game. Milo noticed that the logo for the game was Super Bowl LII. Roman numerals? Who uses those? Milo's grasp of the Roman numeral system is a little rusty, so he looked them up on Wikipedia. Here is some of what he found:

> The original pattern for Roman numerals used the symbols I, V, and X (1, 5, and 10) as simple tally marks. Each marker for 1 (I) added a unit value up to 5 (V), and was then added to (V) to make the numbers from 6 to 9: I, II, III, IIII, V, VI, VII, VIII, VIIII, X.
>
> The numerals for 4 (IIII) and 9 (VIIII) proved problematic and are generally replaced with IV (one less than 5) and IX (one less than 10). This feature of Roman numerals is called subtractive notation.
>
> The numbers from 1 to 10 are expressed in Roman numerals as follows:
>
> I, II, III, IV, V, VI, VII, VIII, IX, X.
>
> The system being basically decimal, tens and hundreds follow the same pattern:
>
> Thus 10 to 100 (counting in tens, with X taking the place of I, L taking the place of V and C taking the place of X):
>
> X, XX, XXX, XL, L, LX, LXX, LXXX, XC, C.
>
> Note that 40 (XL) and 90 (XC) follow the same subtractive pattern as 4 and 9.
>
> Similarly, 100 to 1000 (counting in hundreds):
>
> C, CC, CCC, CD, D, DC, DCC, DCCC, CM, M.
>
> Many numbers include hundreds, units and tens. The Roman numeral system being basically decimal, each "place" is added separately, in descending sequence from left to right, as with "arabic" numbers. For example, the number 39 is XXXIX, (three tens and a ten less one), 246 is CCXLVI (two hundreds, a fifty less ten, a five and a one). As each place has its own notation there is no need for place keeping zeros, so "missing places" can be simply omitted: thus 207, for instance, is written CCVII (two hundreds, a five and two ones) and 1066 becomes MLXVI (a thousand, a fifty and a ten, a five and a one)
>
> *Roman numerals. (2018, January 21). In Wikipedia, The Free Encyclopedia. Retrieved 21:06, February 20, 2018, from https://en.wikipedia.org/w/index.php?title=Roman_numerals&oldid=821541836*

In addition to the information from Wikipedia, Milo finds that to represent a number greater than 3999 requires using an over bar to indicate that a number must be multiplied by 1000. $\bar{V} = 5000$.

Milo needed to kill a little time until the half time show so he decided to whip up a little program to convert Roman numbers to Arabic numbers.

Input: A file that contains an unknown number of Roman numbers each listed on a separate line. All of the numbers will be greater than or equal to I and less than or equal to MMMCMXCIX. All of the Roman numbers in the file will be valid numbers as described above.

Output: The Arabic equivalent of each Roman numeral, each printed on a separate line.

Sample input:	**Sample output:**
IV	4
V	5
VII	7
XIX	19
XX	20
CV	105
MDCLXXVIII	1678